

REMARKS

Claims 13-26 are all the claims pending in the application. Reconsideration of the application and allowance of all claims are respectfully requested in view of the following remarks.

Claims 13-26 are rejected as unpatentable over Soni et al (USP 6,285,674) in view of Gershon et al (USP 6,563,830). This rejection is respectfully traversed.

In the Office action mailed April 27, 2006, the examiner rejected Claims 13, 17, 21 and 25 for anticipation by Soni et al, and the remaining claims 14-16, 18-20, 22-24 and 26 for obviousness over Soni et al in view of Gershon et al. So the art relied on is the same as in the previous Office action, with the anticipation rejection being dropped and all claims included in the obviousness rejection. The two references were discussed in detail in the previous response, and the examiner has not responded to those arguments, instead simply dismissing the arguments as moot in view of the new grounds of rejection. But the arguments are not moot, and in fact the grounds of rejection has not changed at all for ten of the fourteen claims. If the examiner maintains the rejections after considering the present response, the examiner is respectfully requested to respond to the arguments presented.

The invention defined in claim 13 includes three elements:

a unidirectional information flow from the multicast router to the subscriber access node over a point-to-multipoint connection,

a bidirectional flow of control data between the multicast router and each end user via the subscriber access node over separate point-to-point connections, and

at the subscriber access node, replication of the incoming unidirectional information flow from the router to form separate unidirectional multicast information

flows sent from the subscriber access node to each of the end users over respective point-to-point links.

Regarding the requirement for a single unidirectional multicast information flow between a multicast router and a subscriber access node over a point-to-multipoint connection, the examiner has equated the LEC A in Soni et al with the claimed multicast router and the ATM switch 5 with the claimed subscriber access node. LEC A is not a router of any type, much less a multicast router. A router is typically located at a gateway or other connection point of two networks and it forwards packets from one network to another, typically in accordance with a routing table. A multicast router will distinguish between multicast and unicast transmissions and will handle appropriately. LEC A is a LAN emulation client. It is an end point member of a local area network. It is not a router. It is identical to each of LEC B and LEC C, which the examiner equates with the claimed end user equipments. It is unreasonable to read one of these devices as a multicast router and the others as end user equipments when there is no described structural or functional difference between them.

Regarding the requirement in claim 13 for a bidirectional flow of control data between the multicast router and each end user via the subscriber access node over separate point-to-point connections, this is clearly not shown or suggested in Soni et al. As described at lines 28-38 of column 3, Fig. 2 simply illustrates that packets from LEC A are sent to the ATM switch 5 where they are replicated and then forwarded to LEC B and LEC C. It is then stated that “similar connections will be set up for packets originating from client LEC B and client LEC C, so that packets originating from any of the three clients reach the other LAN emulation clients. Thus, while not illustrated, it is clear that there is another connection by which LEC B sends its packets

to ATM switch 5 (or another ATM switch) for replication and forwarding to LEC A and LEC C. And a similar set of further connections for packets to be sent from LEC C. There is no separate discussion at lines 28-38 of column 3 (the only place at which Soni et al discusses Fig. 2) of information flow and control data. So the only reasonable inference is that information and control data are handled over the same connections. Note that claim 13 requires that information flow from the multicast router to the subscriber access node be via a point-to-multipoint connection. If the examiner is to equate LEC A with the multicast router and ATM switch with the subscriber access node, then the connection illustrated in Fig. 2 must be a point-to-multipoint connection from LEC A to ATM switch 5. But claim 13 requires that control data be exchanged separately over separate point-to-point connections between each of the end users LEC B and LEC C and the multicast router LEC A. This is simply not suggested anywhere in Soni et al. The only basis at all for the examiner to conclude the information flow from LEC A to ATM switch 5 is over a point-to-multipoint connection yet the control data is exchanged separately over separate point-to-point connections between each of the end users LEC B and LEC C and the multicast router LEC A is hindsight after reviewing the present application. There is nothing at all in Soni et al which suggests any different handling of control data, much less bidirectional flow over separate point-to-point links between each of LEC A, LEC B and LEC C.

For the above reasons, it is clear that Soni et al does not teach or suggest the subject matter of claim 13. Claim 17 distinguishes over Soni et al for essentially the same reasons, and additionally requiring that there would be a separate point-to-multipoint connection from LEC A (the “multicast router”) and the a plurality of ATM switches. This is not suggested in Soni et al, due in large part to the fact that LEC A is not a multicast router in the first place.

Claims 21 and 25 distinguish over Soni et al for the same reasons as claim 13, and additionally require that there be plural point-to-multipoint connections between LEC A (the “multicast router”) and the ATM switch 5. This is nowhere suggested in Soni et al. The claims also require that the end users (LEC B and LEC C) be able to select amongst plural replicated flows, but in Soni et al each of LEC B and LEC C is shown as receiving only a single replicated flow.

The examiner relies on Gershon to teach the last step of claim 13, i.e., the step of transmitting separate unidirectional multicast information flows from the subscriber access node to each of the end users over respective point-to-point links.

Gershon relates to an ATM-based emulated LAN. An Emulated LAN (ELAN) is shown at 96 in Fig. 5. There is one sending LEC 94 and two listening LECs 98 and 116 (each mis-labeled as an LES in Fig. 5). Each LEC represents a set of users and emulates a LAN interface between these users and higher layer protocols used by these users. (lines 51-55 of column 2). As described at lines 23-40 of column 3, all LECs send their traffic to a LAN Emulation Server (LES) 104 which then forwards the multicast traffic to all appropriate LEC’s. Listening LECs 98 and 116 then forward the traffic to multicast listeners (114, 119) either directly or through a multicast router 112.

Since it is clear from Gershon that all LECs communicate with one another by sending traffic to the LES which then sends traffic to all appropriate destination LECs, the links between the LES and each LEC must of necessity be bidirectional. The examiner has not explained where he finds support in Gershon for unidirectional information flows from the router 112 to each of the end users.

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So not only does Gershon not teach what it is relied on to teach, but even if it does teach the last step of claim 13, it does not make up for the failure of Soni et al to teach the earlier limitations of the claim, as described above.

The dependent claims recite further distinctive features of the invention, but it suffices to note that they are allowable over the prior art due to dependence on allowable parent claims.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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CUSTOMER NUMBER

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